

CLAIMS

1. A compound having structural homology to a contiguous sequence of amino acids within the sequence representing residues 149-197 of the G protein of respiratory syncytial virus, in which
- a) no oligosaccharide is linked to potential serine, threonine or asparagine attachment sites;
- b) four cysteine residues are involved in disulphide linkages; and
- c) the pattern of disulphide linkage is Cys 173 linked to Cys 186, and Cys 176 linked to Cys 182, and in which said compound possesses a biological activity of respiratory syncytial virus G protein.
2. A compound according to Claim 1 in which the virus is selected from the group consisting of human RSV subtype A, human RSV subtype B, bovine RSV, and mutants and variants thereof.
3. A compound according to Claim 1 or Claim 2 in which the compound is a peptide corresponding to amino acids 158 to 196 of the RSV G protein.
4. A compound according to any one of Claims 1 to 3 in which the peptide corresponds to amino acids 165 to 187 of the RSV G protein.
5. A compound according to any one of Claims 1 to 4 in which the compound is a peptide having one of the following amino acid sequences:

SEQ ID NO 1	KQRQNKPPSKPNNDFFHFVFNFPVCSICSNNPTCWAICKRIPNKKPGKK
SEQ ID NO 2	-----N-----
SEQ ID NO 3	-----R
SEQ ID NO 4	--H-----
SEQ ID NO 5	-----N-----
SEQ ID NO 6	-----N-----
SEQ ID NO 7	-----N-----
SEQ ID NO 8	-----R
SEQ ID NO 9	-S-SKN--K--KD-Y-----G--QL-KS---T--SN--K--
SEQ ID NO 10	-S-SKN--K--KD-Y-----G--QL-KS---T--SN--K--

SEQ ID NO 11 -P-PKN--K--KD-Y-----G--QL-KS---T--SN--K--
 SEQ ID NO 12 -P-LKN--K--KD-Y-----G--QL-KS---T--SN--K--
 SEQ ID NO 13 -P-LKN--K--KD-Y-----G--QL-KS---T--SSN--K--
 SEQ ID NO 14 -P-LKN--K--KD-Y-----G--QL-KS---T--SN--K--
 5 SEQ ID NO 15 -S-SKN--K--KD-Y-----G--QL-KS---T--SN--K--
 SEQ ID NO 16 NPSGSI--ENHQDHNN-QTLPY---T-EG-LA-LSL-HIETERA-SRA
 SEQ ID NO 17 -----P-----T-----R-----
 SEQ ID NO 18 -----S-----R-----T-----

10 6. A compound having structural homology to a contiguous sequence of amino acids within the sequence representing residues 149-197 of the G protein of RSV, in which at least one of cysteines 173, 176, 182 and 186 is absent or blocked, and in which said compound is not glycosylated, and has the ability to inhibit infectivity of RSV.

7. A compound according to any one of Claims 1 to 6 in which one or more amino acids is replaced by its corresponding D-amino acid.

20 8. A compound according to any one of Claims 1 to 6 which is a peptidomimetic compound.

9. A compound according to any one of Claims 1 to 6 in which one or more individual amino acids is replaced by an analogous structure.

25 10. A diagnostic composition comprising a compound according to any one of Claims 1 to 10 together with an acceptable carrier.

30 11. A pharmaceutical composition comprising a compound according to any one of Claims 1 to 10 together with a pharmaceutically acceptable carrier.

12. An antibody directed against a compound according to any one of Claims 1 to 10.

13. An antibody according to Claim 12 which is a protective antibody.

35 14. A composition comprising an antibody according to Claim 12 or Claim 13.

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add D12